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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/661,844	09/14/2000	Donald S. Lydon	ADC-1976	1643

23552 7590 09/25/2002

MERCHANT & GOULD PC
P.O. BOX 2903
MINNEAPOLIS, MN 55402-0903

EXAMINER

LEE, CHI HO A

ART UNIT	PAPER NUMBER
2663	

DATE MAILED: 09/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/661,844	LYDON ET AL.	
	Examiner	Art Unit	
	Andrew Lee	2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 14 September 2000.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.
- 4) Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 9-11 is/are allowed.
- 6) Claim(s) 1-8 and 12 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>7</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the output terminals" in line 6. There is insufficient antecedent basis for this limitation in the claim.

It is unclear whether the output terminal is referring to the expansion output terminal or the M1 signal output terminals. The claim will be interpreted as selectively outputting to either output terminals.

Furthermore, N1 signal output terminal in line 8 will be interpreted as M1 signal output terminal.

Specification

2. The disclosure is objected to because of the following informalities:

Co-pending Application number is missing.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guha U.S. Patent Number 5,319,639 in view of Molnar U.S. Patent Number 4,792,970.

Re Claim 1, Guha teaches in fig 8, 6 X 11 crossbar of C1 (first router module) for non-expansion input terminals ($N_1 \times M_1$), wherein the crossbar incorporates switches (fig.5a) (means for routing) for selectively routing of the messages from the inputs and outputs;

6 X 6 crossbar of C2 (second router module) for non-expansion input terminals ($N_2 \times M_2$), wherein the crossbar incorporates switches (fig.5a) (means for routing) for selectively routing of the messages from the inputs and outputs (See col. 8, lines 40-48).

Guha fails to explicitly teach the used of the expansion input and output terminal. However, Molnar et al teaches the expansion port can be use in a communication system to increases network capacity (See col. 3, lines 48-59). The expansion port of Guha can be implemented by designating one or more of the N input port of the first crossbar as expansion port(s) thereby producing output terminal (M_1 signal output) to be connected to the second crossbar (connecting expansion input/output terminal between first and second router module).

Therefore, it would have been obvious to one ordinary skilled incorporate the teaching of Molnar into the teaching of Guha.

Re Claim 2, refer to Claim 1, fig 8 teaches first crossbar (first router module) with a rectangular 6 X 11 cross-point matrix composed of switches (see fig 1 & fig. 5a wherein the switches are conductors), the 6 X 11 crossbar includes expansion ports as suggest in Molnar. The expansion input port is coupled to the input expansion switch and the output expansion conductor is connected to the output expansion terminal. The 6 X 11 switch element is operable selectively interconnecting the 6 inputs with 11 outputs in a non-blocking manner (unique combination of input and output conductors) through the matrix (See col. 6, lines 48 +). The "6" switch elements includes the expansion input terminal, the expansion input terminal is coupled to the output expansion conductor for selectively outputting to any one of the 6 input switches (conductors) and the "11" switch elements is operable for selectively connecting the output expansion conductor to any one of the 11 output conductors.

Re Claim 12, refer to Claim 1 above, wherein the Guha teaches in fig 8, a routing switch comprising of plurality of routers ($n>1$) and within each of the routers are crossbar modules (router modules ($p>=1$)). As suggested by Molnar, the crossbars of Guha incorporate ($n-1$) expansion input terminals and ($n-1$) expansion output terminals to increase system capacity, wherein the crossbar is implemented with switches (fig. 5a) (means for routing).

Guha in view of Molnar fails to explicitly teach the expansion interconnect network where each expansion output terminals of the router module is connected to the expansion input terminal. However, one skilled in the art would have been motivated to interconnect the same number of input and output terminals between

routing switches for interoperability. Therefore, it would have been obvious to one ordinary skilled interconnected routing switches with similar number of terminals for interoperability.

Allowable Subject Matter

5. Claims 9-11 are allowed.
6. The following is a statement of reasons for the indication of allowable subject matter:

As prior art Guha U.S. Patent Number 5,319,639 in view of Molnar U.S. Patent Number 4,792,970 teaches a routing module incorporating n X m rectangular matrix for selectively cross-connecting the inputs and output in a non-blocking manner and expansion port for increasing the system capacity. Prior art fails to teach as recited in independent claim 9, the switching core including the N SIPO registers coupled to an input bus and a first memory that buffers the parallel data on the input bus to a first intermediate bus, and the output expansion interface connected to the first intermediate bus for supplying the parallel data on the to the expansion output terminal.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

U.S. Patent Number 4796254 teaches the space switching with P/S converter;

U.S. Patent Number 5008878 teaches modular switching apparatus;

U.S. Patent Number 5377181 teaches signal switching with plurality P/S converters;

U.S. Patent Number 5499239 teaches capacity modular ATM switch;

U.S. Patent Number 5550815 teaches a growable packet switch;
U.S. Patent Number 5796732 teaches a expandable switching bus;
U.S. Patent Number 5859844 teaches expansion system for a cross connecting device.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Lee whose telephone number is 703-305-1500. The examiner can normally be reached on Monday to Friday from 8:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 703-308-5340. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.



Andy Lee
September 24, 2002